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Please amend the application as follows:

In the Claims

Please cancel Claims 1, 2, 6-12, 23-27, 50-54 and 56-58.

Please add new Claims 59 - 123.

Rule 1.126 ⁶⁷
~~59~~

(New) A method for determining whether a biomolecule inhibits growth of cells, comprising:

- a) introducing a cell having an exogenous regulable gene encoding a biomolecule into one or more test animals and into one or more control animals, wherein the biomolecule binds a protein target component of the cells;
- b) regulating expression of the exogenous gene in the test animals to allow production of the biomolecule; and
- c) monitoring the test animals for growth of the cells wherein observing fewer of the cells or a slower growth rate of the cells in the test animals compared to the number of the cells or growth rate of the cells in the control animals indicates that the biomolecule inhibits growth of cells.

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(New) The method of claim ⁶⁷~~59~~, further comprising the step of first constructing the cell having the exogenous regulable gene encoding the biomolecule.

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(New) The method of claim ⁶⁷~~59~~, further comprising the steps of first

- i) constructing the cell having the exogenous regulable gene encoding the biomolecule;
- ii) regulating expression of the exogenous regulable gene in a culture of constructed cells, thereby producing the biomolecule in the constructed cells; and
- iii) monitoring growth of the constructed cells in culture, relative to growth of control cells, whereby, if growth is decreased in the constructed cells, compared to growth of the control cells, then the biomolecule inhibits growth.

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- 70 ⁶⁷~~62~~. (New) The method of claim ⁶⁷~~59~~, wherein the protein target component comprises a complex comprising more than one gene product.
- 71 ⁶⁷~~63~~. (New) The method of claim ⁶⁷~~59~~, wherein the protein target component comprises a gene product.
- 72 ⁶⁷~~64~~. (New) The method of claim ⁶⁷~~59~~, wherein the protein target component comprises an enzyme.
- 73 ⁶⁷~~65~~. (New) The method of claim ⁶⁷~~59~~, wherein the biomolecule is a polypeptide or a peptide.
- 74 ⁶⁷~~66~~. (New) The method of claim ⁶⁷~~59~~, wherein the biomolecule is a fusion protein.
- 75 ⁶⁷~~67~~. (New) The method of claim ⁶⁷~~59~~, wherein the cell is a mammalian cell.
- 76 ⁶⁷~~68~~. (New) The method of claim ⁶⁷~~59~~, wherein the cell is a pathogen cell.
- 77 ⁶⁸~~69~~. (New) The method of claim ⁶⁸~~60~~, wherein the protein target component comprises a gene product, a complex comprising more than one gene product, or an enzyme.
- 78 ⁷⁷~~70~~. (New) The method of claim ⁷⁷~~69~~, wherein the protein target component comprises an enzyme.
- 79 ⁷⁸~~71~~. (New) The method of claim ⁷⁸~~70~~, wherein the biomolecule is a polypeptide.
- 80 ⁷⁸~~72~~. (New) The method of claim ⁷⁸~~70~~, wherein the biomolecule is a peptide.
- 81 ⁷⁸~~73~~. (New) The method of claim ⁷⁸~~70~~, wherein the biomolecule is a fusion protein.
- 82 ⁷⁷~~74~~. (New) The method of claim ⁷⁷~~69~~, wherein the cell is a mammalian cell.

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83
75. (New) The method of claim ⁷⁷~~69~~, wherein the cell is a pathogen cell.
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84
76. (New) A method for determining whether a biomolecule inhibits infection by a pathogen cell, comprising:

- a) introducing a pathogen cell having an exogenous regulable gene encoding a biomolecule into one or more test animals and into one or more control animals, wherein the biomolecule binds a protein target component of the pathogen cell;
- b) regulating expression of the exogenous gene in the test animals to allow production of the biomolecule; and
- c) monitoring the test animals for signs of infection, wherein observing fewer or less severe signs of infection in the test animals compared to signs of infection in the control animals indicates that the biomolecule inhibits infection by the pathogen.

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77. (New) The method of claim ⁸⁴~~76~~, further comprising the step of first constructing the pathogen cell having the exogenous regulable gene encoding the biomolecule.
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86
78. (New) The method of claim ⁸⁴~~76~~, further comprising the steps of first

- i) constructing the pathogen cell having the exogenous regulable gene encoding the biomolecule;
- ii) regulating expression of the exogenous regulable gene in a culture of constructed pathogen cells, thereby producing the biomolecule in the constructed pathogen cells; and
- iii) monitoring growth of the constructed pathogen cells in culture, relative to growth of control cells, whereby, if growth is decreased in the constructed pathogen cell, compared to growth of the control cell, then the biomolecule inhibits growth.

87
79. (New) The method of claim ⁸⁴~~76~~, wherein the protein target component comprises a complex comprising more than one gene product.

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~~80.~~ (New) The method of claim ⁸⁴~~76~~, wherein the protein target component comprises a gene product.

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~~81.~~ (New) The method of claim ⁸⁴~~76~~, wherein the protein target component comprises an enzyme.

⁹⁰
~~82.~~ (New) The method of claim ⁸⁴~~76~~, wherein the biomolecule is a peptide or a polypeptide.

⁹¹
~~83.~~ (New) The method of claim ⁸⁴~~76~~, wherein the biomolecule is a fusion protein.

⁹²
~~84.~~ (New) The method of claim ⁸⁵~~77~~, wherein the protein target component comprises a gene product, a complex comprising more than one gene product, or an enzyme.

⁹³
~~85.~~ (New) The method of claim ⁹²~~84~~, wherein the protein target component comprises an enzyme.

⁹⁴
~~86.~~ (New) The method of claim ⁹³~~85~~, wherein the biomolecule is a polypeptide.

⁹⁵
~~87.~~ (New) The method of claim ⁹³~~85~~, wherein the biomolecule is a peptide.

⁹⁶
~~88.~~ (New) The method of claim ⁹³~~85~~, wherein the biomolecule is a fusion protein.

⁹⁷
~~89.~~ (New) A method of determining whether a peptide or a polypeptide inhibits growth of cells, comprising:

- a) introducing a cell having an exogenous regulable gene encoding a peptide or a polypeptide into one or more test animals and into one or more control animals,
- b) regulating expression of the exogenous gene in the test animals to allow production of the peptide or the polypeptide; and

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- c) monitoring the test animals for growth of the cells, wherein observing fewer of the cells or a slower growth rate of the cells in the test animals compared to the number of the cells or growth rate of the cells in the control animals indicates that the biomolecule inhibits growth of cells.

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~~98.~~ (New) The method of claim ⁹⁷~~88~~, further comprising the step of first constructing the cell having an exogenous regulable gene encoding the peptide or the polypeptide.

⁹⁹
~~99.~~ (New) The method of claim ⁹⁷~~88~~, further comprising the steps of first

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- i) constructing the cell having the exogenous regulable gene encoding the peptide or polypeptide;
- ii) regulating expression of the exogenous regulable gene in a culture of constructed cells, thereby producing the peptide or polypeptide in the constructed cells; and
- iii) monitoring growth of the constructed cells in culture, relative to growth of control cells, whereby, if growth is decreased in the constructed cell, compared to growth of the control cell, then the peptide or polypeptide inhibits growth.

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~~92.~~ (New) The method of claim ⁹⁷~~88~~, wherein the peptide or the polypeptide binds a target component of the cell.

¹⁰¹
~~93.~~ (New) The method of claim ⁹⁷~~88~~, wherein the polypeptide is a fusion protein.

¹⁰²
~~94.~~ (New) The method of claim ¹⁰⁰~~92~~, wherein the target component comprises a complex comprising more than one gene product.

¹⁰³
~~95.~~ (New) The method of claim ¹⁰⁰~~92~~, wherein the target component comprises a gene product.

¹⁰⁴
~~96.~~ (New) The method of claim ¹⁰⁰~~92~~, wherein the target component comprises an enzyme.

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⁹⁷
~~105~~ ~~97~~. (New) The method of claim ~~89~~⁹⁷, wherein the cell is a mammalian cell.

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~~106~~ ~~98~~. (New) The method of claim ~~89~~⁹⁷, wherein the cell is a pathogen cell.

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~~107~~ ~~99~~. (New) The method of claim ~~90~~⁹⁸, wherein the peptide or the polypeptide binds a target component of the cell.

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~~108~~ ~~100~~. (New) The method of claim ~~99~~¹⁰⁷, wherein the target component comprises a gene product, a complex comprising more than one gene product, or an enzyme.

¹⁰⁸
~~109~~ ~~101~~. (New) The method of claim ~~100~~¹⁰⁸, wherein the cell is a mammalian cell.

¹⁰⁸
~~110~~ ~~102~~. (New) The method of claim ~~100~~¹⁰⁸, wherein the cell is a pathogen cell.

~~111~~ ~~103~~. (New) A method for determining whether a peptide or a polypeptide inhibits infection by a pathogen cell, comprising:

- a) introducing a pathogen cell having an exogenous regulable gene encoding a peptide or a polypeptide into one or more test animals and into one or more control animals;
 - b) regulating expression of the exogenous gene in the test animals to allow production of the peptide or the polypeptide; and
 - c) monitoring said test and control animals for signs of infection;
- whereby observing fewer or less severe signs of infection in said test animals compared to signs of infection in the control animals indicates that the peptide or polypeptide inhibits infection by the pathogen cell.

¹¹¹
~~112~~ ~~104~~. (New) The method of claim ~~103~~¹¹¹, further comprising the step of first constructing the pathogen cell having an exogenous regulable gene encoding the peptide or the polypeptide.

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¹¹³
~~105.~~ (New) The method of claim ¹¹¹~~103~~, further comprising the steps of first
i) constructing the pathogen cell having the exogenous regulable gene encoding the peptide or polypeptide;
ii) regulating expression of the exogenous regulable gene in a culture of constructed pathogen cells, thereby producing the peptide or polypeptide in the constructed pathogen cells; and
iii) monitoring growth of the constructed pathogen cells in culture, relative to growth of control cells, whereby, if growth is decreased in the constructed pathogen cell, compared to growth of the control cell, then the peptide or polypeptide inhibits growth.

¹¹⁴
~~106.~~ (New) The method of claim ¹¹¹~~103~~, wherein the peptide or the polypeptide binds a target component of the cell.

¹¹⁵
~~107.~~ (New) The method of claim ¹¹¹~~103~~, wherein the peptide or polypeptide is a fusion protein.

¹¹⁶
~~108.~~ (New) The method of claim ¹¹⁴~~106~~, wherein the target component comprises a complex comprising more than one gene product.

¹¹⁷
~~109.~~ (New) The method of claim ¹¹⁴~~106~~, wherein the target component comprises a gene product.

¹¹⁸
~~110.~~ (New) The method of claim ¹¹⁴~~106~~, wherein the target component comprises an enzyme.

¹¹⁹
~~111.~~ (New) A method for identifying a compound which is a candidate for producing a phenotypic effect in a cell, said method comprising the steps of:
a) introducing a cell having an exogenous regulable gene encoding a biomolecule into one or more animals;
b) regulating expression of the exogenous gene in the animals to allow production of the biomolecule;
c) monitoring said cell in the animal for the phenotypic effect; and

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- d) identifying, if the biomolecule caused the phenotypic effect, one or more compounds that competitively bind to a target cell component to which the biomolecule binds, whereby if the compound competitively binds to the target cell component, then the compound is a candidate for producing the phenotypic effect.

120
112. (New) The method of claim ¹¹⁹~~111~~, further comprising the step of first constructing the cell having the exogenous regulable gene encoding the biomolecule.

121
113. (New) The method of claim ¹¹⁹~~111~~, further comprising the steps of first

i) constructing the cell having the exogenous regulable gene encoding the biomolecule;

ii) regulating expression of the exogenous regulable gene in a culture of constructed cells, thereby producing the biomolecule in the constructed cells; and

iii) monitoring growth of the constructed cells in culture, relative to growth of control cells, whereby, if growth is decreased in the constructed cells, compared to growth of the control cells, then the biomolecule inhibits growth.

122
114. (New) The method of claim ¹¹⁹~~111~~, wherein the biomolecule is a polypeptide or a peptide.

123
115. (New) The method of claim ¹¹⁹~~111~~, wherein the biomolecule is a fusion protein.

124
116. (New) The method of claim ¹¹⁹~~111~~, wherein the cell is a mammalian cell.

125
117. (New) The method of claim ¹¹⁹~~111~~, wherein the cell is a pathogen cell.

126
118. (New) The method of claim ¹¹⁹~~111~~ wherein the phenotypic effect is growth inhibition.

127
119. (New) The method of claim ¹²⁰~~112~~ wherein the phenotypic effect is growth inhibition.

128
120. (New) The method of claim ¹²⁷~~119~~ wherein the biomolecule is a peptide or polypeptide.

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